Montana Department of Environmental Quality

SWAP NEWS

Pollution Prevention Bureau **Summer 2003**

In this Issue

This annual newsletter, the *SWAP NEWS* (an acronym for the "Source Water Assessment Program newsletter"), is published by the Department of Environmental Quality (DEQ) to keep Public Water System (PWS) operators abreast of source water related events and issues. The first newsletters (1998-99) were sent only to those with an expressed interest in wellhead or source water protection issues. The current subscriber's list includes all community and non-community non-transient water system operators in order to keep you informed about the program since completion of the assessments is required by the federal Safe Drinking Water Act.

By the end of summer 2003, the Source Water Assessment Reports will be completed for approximately 45% of the public water system in Montana. If you haven't heard from us yet, please know that we will need your help in order to complete your source water assessment report. Since most of our work will occur through our office in Helena, we will be contacting you by phone or mail to inquire about your wells or distribution system. We are confident that we can meet the requirements of the federal Safe Drinking Water Act if we cooperate with those who best know the system and area, namely you, the PWS operator. Our target date for full implementation is June 2006.

If you have any questions about the Source Water Assessment Program (SWAP), please call Joe Meek, DEQ, at (406) 444-4806. And please forgive us if this newsletter reaches you in error. While we make every effort to ensure our mailing list is correct, changes in PWS ownership or management occur daily. We do our best to send it only to those with a vested interest in source water issues.

SOURCE WATER ASSESSMENT PROGRAM OBJECTIVES

❶ *Identify the Source(s) of Water Used by Public Water Systems*
❷ *Identify and Inventory Potential Contaminant Sources*
❸ *Assess the Susceptibility of Public Water Systems to Potential Contaminant Sources*
❹ *Make the Results of the Delineation and Assessment Available to the Public*

When you receive a draft report from DEQ, we will be asking for your input. Please make corrections right on the draft copy and return it to us in the envelope provided. In most cases we are able to provide an accurate draft report, but sometimes the information we use from the sanitary survey or other sources is out of date or incorrect. Your input is essential to making the reports as accurate as possible so please take the time to let us know where corrections are needed.

Keep in mind that these reports are intended to help you continue to provide safe drinking water to your customers. Occasionally, PWS operators are surprised to see that they have "high susceptibility" to contamination from nearby septic systems due to development density and the many sensitive aquifers utilized around the state. The susceptibility ranking should not cause panic or outrage; it should merely serve as a reminder to be vigilant about sewage disposal occurring above the aquifer you drink out of. It is far easier to prevent contamination than it is to clean it up.

You can see examples of completed reports on the Internet at: **http://nris.state.mt.us/wis/swap/swapquery.asp**

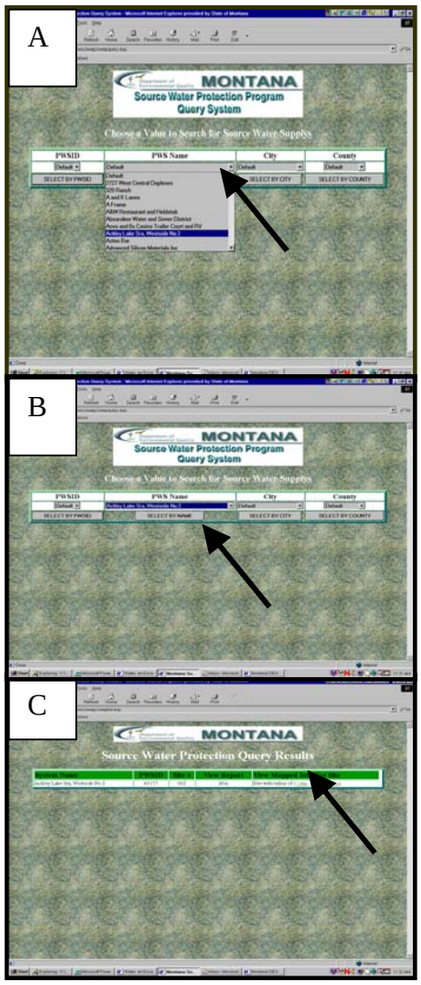
WHO WILL BE AFFECTED BY SOURCE WATER ASSESSMENT?

❶ **Public water systems** will receive a technical report describing their water source(s) sometime before June 2006. DEQ's Source Water Protection Program will prepare these reports. Alternatively, certain public water systems may be able to use their own contractor to do the work using program funds.

❷ **Property or business owners** that engage in certain activities regulated by DEQ might be identified on maps provided to public water systems. The information is provided to encourage communication and cooperation between public water systems and those that may impact the water resource.

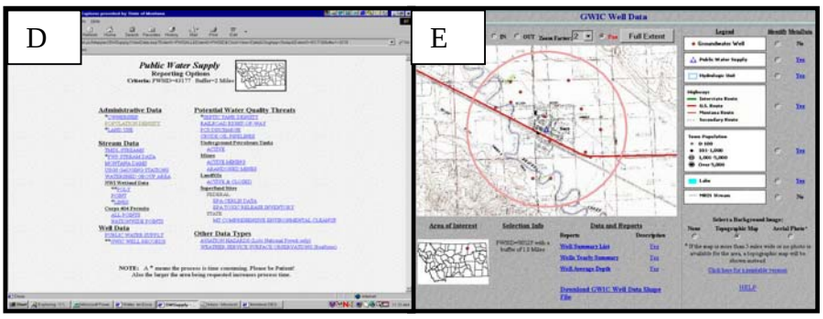
❸ **Users of public water systems** will be able to access information about their water supply.

Source Water Protection Mapping on the Web



Have you ever wanted to see your own public supply well plotted on a USGS topographic map? Better yet, have you ever wanted to see a map that shows your public water supply well and potential contaminant sources in the surrounding area? Or, would you like to see an aerial photograph (orthophoto) of the area covered by the map of your public water supply? The Source Water Protection Program's mapping system gives you the ability to do all of the above and more from the comfort of your own web browser. The Map Query System (MQS) was built under a joint project with the Natural Resource Information System (NRIS). You can find the MQS at this web address: http://nris.state.mt.us/wis/swap/swapquery.asp.

To use the MQS, pick a public water supply name (Figure A) and then click on the "Select By Name" button (Figure B). On the next screen, select a buffer distance (Figure C), and on the following screen select the type of information you want to see (Figure D). The next screen will show your map; you can use the **Select a Background Image** (Figure E) to display the USGS topo map as the background. Give it a try and if you have questions contact the Source Water Protection Program at the phone numbers and email addresses on the back of this newsletter. In addition, NRIS has other web programs that put a lot of mapping power at your fingertips. Learn more about those programs at this web address: http://nris.state.mt.us/mapper



SWAP for New Sources-

Source Water Assessment & Circular PWS 6 Reports

Questions frequently arise asking, "How are source water assessments completed for new PWS drinking water sources?" Or, "We have submitted plans and specifications for a new drinking water source and have been told that now we have to do a PWS 6 Report; what does that mean?" ***Department Circular PWS 6*** describes the requirements a developer or PWS owner must meet in order to develop a new drinking water source. It goes hand in hand with new source plan and specification development and is intended to make sure the new source is located and constructed to ensure the long term delivery of high quality drinking water. An adequate assessment by DEQ can only be completed when information is provided by the developer or PWS owner that describes a proposed source in relation to other physical and cultural features in the area of the new well or spring.

The state has required all new PWS sources to consider source water protection for the past two decades. These requirements were originally found in the language of "*DHES Circular PWS-1 Standards for Water Works"* and its predecessor known as the "Ten State Standards" dating back to 1982. To meet the requirements of those design standards, information was required to be included in the design report that described aquifer characteristics and identified potential sources of contamination. The standards are now described in Circular DEQ 1.

> "In selecting the source of water to be developed, the designing engineer must prove to the satisfaction of the reviewing authority, that an adequate quantity of water will be available, and that the water which is to bee delivered to the consumers will meet the current requirements of the reviewing authority with respect tc microbiological, physical, chemical and radiological qualities. Each water supply should take its raw water from the best available source which is economically reasonable and technically possible." ***(Circular DEQ 1 Standards for Water Works. MT DEQ 1998)***

Department Circular PWS 6 was written to add definition and consistency to the review process; it does not create additional requirements. PWS 6 is the mechanism by which the source water assessment requirement is met for new water sources as required by the SDWA. Review authority for new wells rests with the Public Water Supply Section at DEQ.

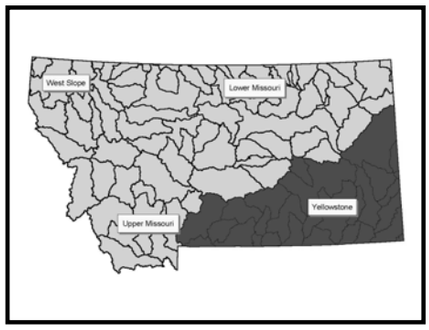
Proposed sources of drinking water typically should have moderate or low susceptibility to contaminant sources.

When susceptibility is high or very high, SWP Section staff will recommend construction or other man-made barriers be identified and put in place, or an alternate well location selected.

SWAP Status by Watershed in Montana

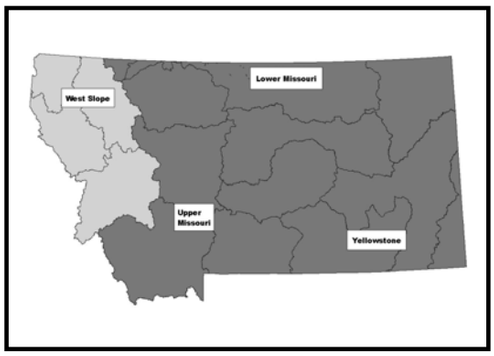
In Montana, implementation of the Source Water Assessment Program is based on a watershed approach that: 1) identifies SWAP implementation priorities within each major watershed, 2) assigns oversight responsibilities to program staff for source water assessments within each of the major watersheds, and 3) tracks program implementation within each watershed.

Yellowstone River Project Area



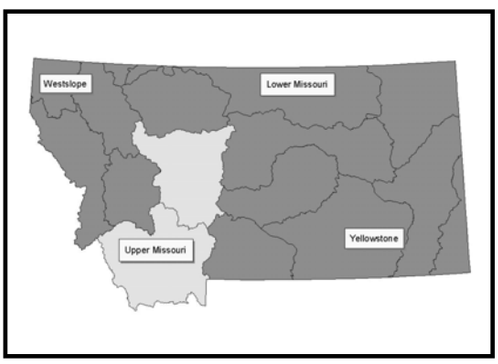
The Yellowstone River Watershed (YRW) Project Area includes the area south of the Yellowstone River from its headwaters in the Paradise Valley to the Montana-North Dakota border (Figure 1). The watershed is comprised of about 27 sub-basins with more than 400 Public Water Supplies (PWSs). At present, Source Water Assessment Reports (SWDARs) have been completed for about 40% of the PWSs in this project area. Eleven percent (11%) of the remaining systems in the watershed are in progress, either by DEQ staff or under a service contract. Of the PWSs that have not been started, only 5 are high priority and 10 are moderate priority community systems. These high and moderate priority systems are scheduled to be completed by the end of this fiscal year, July 31, 2004. It is important to note that all but one of the PWSs that use surface water as their source water have SWDARs completed. The last surface water system, the City of Billings, is scheduled to be completed by the end of September 2003. Service contracts are in place to complete SWDARs for schools and for transient PWSs operated by the U.S. Forest Service. The contracts are statewide in scope and are designed to supplement the effort of DEQ's Source Water Protection Program. For more information on SWDAR activity in the YRW, please contact Jim Stimson at (406) 444-6832.

West Slope Watershed Project Area



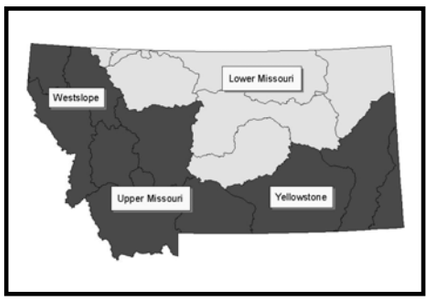
The West Slope Watershed (WSW) Project Area includes the area west of the Continental Divide. The watershed is comprised of the drainage basins of the Kootenai River, the Flathead River, the Clark Fork River, and the Bitterroot River. There are about 963 PWSs within the WSW. To date SWDARs have been written for about 40% of these PWSs. SWDARs have been written for all of the PWSs known to use surface water as their main water source and for PWSs in or around several of the largest communities in the watershed. It appears that the most common potential contaminant sources in the WSW for which the PWSs have a high to very high susceptibility are localized areas of increased septic density, community sewer lines, and transportation corridors. There are 7 communities in the WSW that have developed Source Water Protection Plans to protect their water sources. For more information on SWDAR activity in the WSW, please contact Jeffrey Herrick at (406) 444-1595

Upper Missouri River Watershed



The Upper Missouri River Watershed (UMRW) Project Area includes the area south of the Missouri River from its headwaters near Three Forks, Montana north to the Marias River confluence. This UMRW is comprised of 13 sub-basins that include approximately 542 PWSs. Currently, SWDARs for 41% of the PWSs in the watershed have been completed. SWDARs for all PWSs in the watershed that utilize surface water are complete. Source Water Protection Plans have been completed for seven PWSs including: the Virginia City Water Department, the Town of West Yellowstone, Pleasant Valley Colony, Centerville School, Stockett Water and Sewer District, Gore Hill County Water District, and Windy Acres Water User's Association. Of the 26 schools located in the UMRW, SWDARs for 9 have been completed and 13 are in progress. The most common potential contaminant sources noted during the completion of SWDARs in the UMRW include underground storage tanks for fuel, septic systems, and cropped agricultural land. The effort to complete SWDARs in the UMRW will continue to focus on those sub-basins with large numbers of PWSs that are designated as high priority. For more information on SWDAR activity in the UMRW, please contact Carolyn DeMartino at (406) 444-0820.

Lower Missouri Watershed



The Lower Missouri Watershed encompasses the Missouri River watershed from the Marias River confluence to the North Dakota border. Approximately 250 PWSs are located in 39 sub-basins in the watershed. To date SWDARs have been written for about 47% of these PWSs. SWDARs have been written for all of the PWSs known to use surface water as their main water source and for PWSs in or around several of the largest communities in the watershed. For more information on Source Water Protection activities in the Lower Missouri Watershed, please contact Julie Harvey at (406) 444-0471.

Changes at DEQ

A reorganization of the Planning, Prevention and Assistance Division is resulting in moving the Source Water Protection Program into the Technical and Financial Assistance Bureau. The SWAP folks will be combined with the drinking water & wastewater State Revolving Loan Fund (SRF) programs to enhance our ability to provide more comprehensive non-regulatory technical assistance. The combined bureau will also include the Montana Wetland Program. An Environmental Protection Agency grant program administered by the DEQ Wetland Coordinator funds wetland conservation where currently there are 20 active grant projects involving state and local governments. Wetland grant projects are solicited each fall and funding is available for approved projects the following spring. Lynda Saul is DEQ's Wetland Program coordinator. The new organizational structure puts the wetland grant program in closer contact with others at DEQ who provide non-regulatory technical and financial assistance on water-related issues.

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